

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and light of the following discussion is respectfully requested.

Claims 1-17 are pending in this application. By this amendment, Claims 1, 2, 6-8, 12 and 13 have been amended; and Claim 17 has been added. The amendments to independent Claims 1, 7, and 13 are supported, by way of non-limiting example, in application FIG. 7 and the corresponding specification description. New Claim 17 finds support, by way of non-limiting example, in application FIG. 5. The amendments to the other claims are formal in nature. Accordingly, it is respectfully submitted that no new matter has been added.

In the outstanding Office Action, Claims 1-4, 6-10, and 12-14 were rejected under 35 U.S.C. § 103 as being unpatentable over Kim et al. (U.S. 20004/0114495 A1, hereinafter “Kim”) in view of Ogata (U.S. 2005/0174918 A1); and Claims 5 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Ogata and further in view of Kanaya et al. (U.S. 2006/0077784 A1, hereinafter “Kanaya”). Claims 15 and 16 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Applicant acknowledges with appreciation the indication that Claims 15 and 16 include allowable subject matter. However, as Applicant considers that Claims 1, 7, and 13 as amended herein patentably define over the cited references, Claims 15 and 16 have been maintained in dependent form.

Claims 1 and 7 recite, in part:

a photo-detector for receiving light beams reflected from
the optical disc; and

a control circuit connected to the photo-detector for controlling the comatic aberration connecting device in response to the detected reflected light beams.

Claim 13 recites, in part:

receiving light beams reflected from the optical disc; and
controlling the comatic aberration in response to receipt of the reflected light beams.

It is respectfully submitted that these features are neither disclosed by nor rendered obvious by Kim, Ogata, Kanaya, or any conceivable combination thereof.

Kim describes:

a light source, that is, the second optical unit 20 of FIG. 2 is moved within a plane perpendicular to the proceeding direction of light so that the optical axis of the second beam 21a incident upon the second objective lens 41 is tilted 0.98 degrees, the wavefront error occurring in the second objective lens 41 is greatly reduced to 0.0110 λ rms. This is because the correction of the wavefront error can be performed in the direction of reducing the coma aberration or astigmatism...¹

Ogata describes a wavefront aberration compensation element 7 that includes a liquid crystal layer 10.² Ogata states:

By controlling the voltage applied to S and T shown in FIG. 14, the distribution of the refractive index in a liquid crystal part changes, and phase differences created, to thereby achieve compensation for the coma aberration.³

Ogata further describes:

For example, there is a four times difference in the inclination of residual aberration (λ /mm) between area a and area b shown in FIG. 3. Such a wavefront can be accurately compensated for by differently setting the gradient of the voltage applied from the liquid crystal part driving apparatus 13 to each area (each cell 10a) of the liquid crystal layer 10. By changing the voltage applied to respective areas of the liquid crystal layer 10 disposed between the electrode layer 9 and the opposing electrode layer 11, the amount of phase change of the

¹ Paragraph [0193].

² See paragraph [0057].

³ Paragraph [0060].

wavefront aberration can be changed in correspondence with the amount of residual aberration when transmitting through each area (each cell 10a).⁴ Accordingly, residual aberration can be further restrained.

Kanaya describes “a thin optical pickup and an optical disk drive adapted for a plurality of wavelengths and including a thin two-axis actuator in which the entry range of laser light is limited”⁵ so as to be adapted for a plurality of wavelengths.⁶

Neither Kim nor Ogata nor Kanaya describes or renders obvious receiving light beams reflected from the optical disk or controlling the comatic aberration in response to receipt of the reflected light beams as recited in Claims 1, 7, and 13.

It is respectfully submitted that dependent Claims 2-6, 8-12, 14 and 17 are patentable at least for the reasons argued above with regard to the claims from which they depend.

Accordingly, it is respectfully requested that the rejections of Claims 1-14 be reconsidered and withdrawn, and that Claims 1-17 be found allowable.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

⁴ Paragraph [0068].

⁵ Paragraph [0023].

⁶ Paragraph [0015].

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below-listed telephone number.

Respectfully submitted,

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A handwritten signature in black ink, reading "Michael L. Gellner". The signature is written in a cursive style with a horizontal line underneath the name.

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